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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/760,562	01/20/2004	Shih-Hsien Chen	AUO-101	1069

7590

09/28/2005

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Chicago, IL 60601

EXAMINER
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HAN, JASON

ART UNIT	PAPER NUMBER
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2875

DATE MAILED: 09/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/760,562	Applicant(s) CHEN ET AL.	
	Examiner Jason M. Han	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 August 2005.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 April 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on August 15, 2005 has been entered.

### ***Response to Arguments***

2. Applicant's arguments with respect to Claims 1-19 have been considered but are moot in view of the new ground(s) of rejection.
3. Applicant's amendment to the claims have been considered, but the prior art of record remains commensurate to the scope of the claims as broadly interpreted [MPEP 2111] and defined below in the rejections.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-2, 4-6, and 8-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayres (U.S. Patent 6068381).

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5. With regards to Claim 1, Ayres discloses a backlight assembly for illuminating a liquid crystal display including:

- A frame having a frame body [Figure 1: (20, 24)] in which are embedded a plurality of contact pads [Figure 1: (58, 60)], whereby a portion of each of the pads are integrally surrounded by a material comprising the frame body, wherein the frame body is configured to assemble the liquid crystal panel [Figure 8: (86)] with the backlight assembly [Figure 8: (90); Column 2, Lines 63-65];
- A light guide plate [Figure 1: (14)] mounted to the frame; and
- One or more light-emitting devices [Figure 1: (52)] connected to the contact pads and respectively having a light-irradiating surface facing a first surface [Figure 1: (44)] of the light guide plate, whereby the light irradiated from the one or more light-emitting devices emerges out through a second surface of the light guide plate [Figure 1: (46)] towards the liquid crystal panel.

6. With regards to Claim 2, Ayres discloses, "In providing the improved light output, the device outputs a combination of light extracted via a light extracting surface of the waveguide as well as light reflected from an opposed reflective surface of the waveguide [Column 1, Lines 63-67]... The reflective white plastic diffuser mounted behind the waveguide reflects light from the light scattering element back through the top surface of the waveguide through the open spaces between the dots of the light scattering element approximately doubling the light output of the back lighting device vis-à-vis conventional back lighting devices [Column 3, Lines 24-30]."

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7. With regards to Claim 4, Ayres discloses the one or more light-emitting devices are positioned approximate to a side edge of the light guide plate [Figure 1: (44)].

8. With regards to Claim 5, Ayres discloses a reflection member [Figure 1: (40); Column 4, Lines 47-49; Column 1, Lines 38-43] in an area of the side edge of the light guide plate to reflect light irradiated from the one or more light-emitting devices.

9. With regards to Claim 6, Ayres discloses the reflection member being a reflective coating/foil [Column 1, Lines 38-43].

10. With regards to Claim 8, Ayres discloses the light guide plate including one or more recessed cavities [Figure 1: surrounding areas of (44)] on the first surface for accommodating the light-irradiating surface [Figure 1: (44)] of the one or more light-emitting devices.

11. With regards to Claim 9, Ayres discloses the first surface [Figure 1: (44)] of the light guide plate being a side edge surface of the light guide plate.

12. With regards to Claim 10, Ayres discloses the frame body being formed by injection molding [Column 2, Lines 52-56].

13. With regards to Claim 11, Ayres discloses the contact pads [Figures 1 & 4: (56, 58, 60)] including resilient bent portions [Figure 4: (66)] to which the one or more light-emitting devices [Figure 4: (52)] are connected.

14. With regards to Claim 12, Ayres discloses, "The lamp and terminal assembly 16, as shown in FIG. 4, is made up of a conventional illuminating lamp member 52 having a tubular light emitting body 54 mounted to enlarged metallic end members 56.

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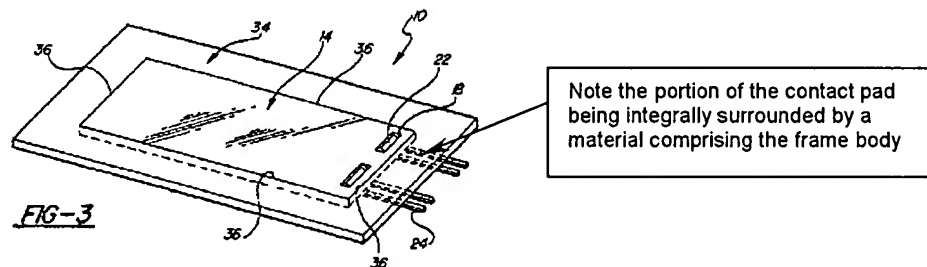
Preshaped terminals 58, 60 include tabs 62 that are soldered directly to the end members 56 [Column 4, Lines 60-65; underline added by examiner for emphasis].”

15. With regards to Claim 13, Ayres discloses the contact pads being made of a conductive metal or metallic alloy [Column 4, Lines 60-63].

16. Claims 1, 3, 5, 7, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayres (U.S. Patent 5947578).

17. With regards to Claim 1, Ayres discloses a backlight assembly for illuminating a liquid crystal panel including:

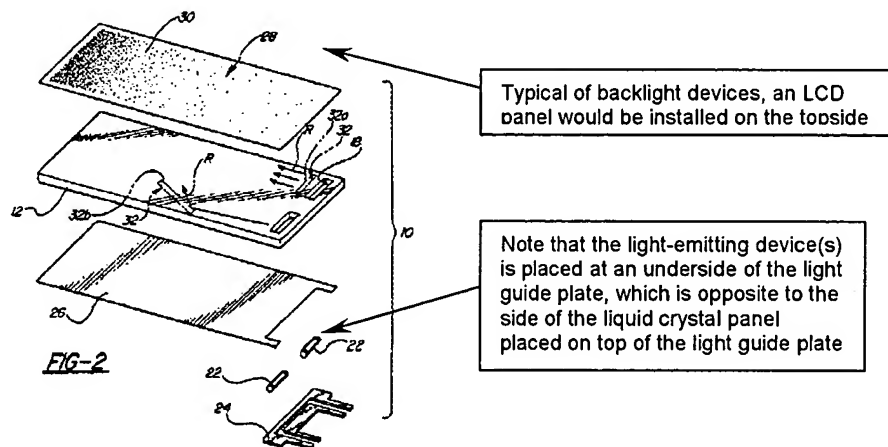
- A frame having a frame body [Figure 3: (34)] in which are embedded a plurality of contact pads [Figures 1-3: (24)], whereby a portion of each of the pads are integrally surrounded by a material comprising the frame body, wherein the frame body is configured to assemble the liquid crystal panel with the backlight assembly [Column 1, Lines 34-37; Column 3, Lines 27-30];



- A light guide plate [Figure 2: (12)] mounted to the frame; and
- One or more light-emitting devices [Figure 2: (22)] connected to the contact pads and respectively having a light-irradiating surface facing a first surface of the light guide plate [Figure 2: proximate (32)], whereby the light irradiated [Figure 2: (R)] from the one or more light-emitting devices emerges out

through a second surface of the light guide plate [Figure 2: top of (12)]  
towards the liquid crystal panel.

18. With regards to Claim 3, Ayres discloses one or more light-emitting device being placed at a side of the light guide plate opposite to the side of the liquid crystal panel [note drawing below].



19. With regards to Claim 5, Ayres discloses a reflection member [Figure 2: (26)] being provided in an area of the side edge of the light guide plate to reflect light irradiated from the one or more light-emitting device.

20. With regards to Claim 7, Ayres discloses the reflection member [Figure 2: (26)] being a surface of the light-guide plate [Figure 2: bottom of (12)] inclined at an angle.

21. With regards to Claim 14, Ayres discloses the one or more light-emitting device including a light-emitting diode [Column 2, Lines 3-5].

22. Claims 15-18 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayres (U.S. Patent 6068381).

23. With regards to Claim 15, Ayres discloses a frame structure for a backlight assembly including:

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- A frame body [Figure 1: (20, 24); Figure 8: (104)] configured to assemble a liquid crystal panel [Figure 8: (86)] with the backlight assembly [Figure 1: (10); Figure 8: (90)]; and
- A plurality of contact pads [Figure 1: (58, 60)] embedded in the frame body, wherein the contact pads externally connect to a power source [Figure 4: (66); Column 5, Lines 9-13] and are configured to receive the mount of one or more light-emitting device [Figure 1: (52)].

24. With regards to Claim 16 Ayres discloses the frame body being formed by injection molding [Column 2, Lines 52-56].

25. With regards to Claim 17, Ayres discloses the contact pads [Figures 1 & 4: (58, 60)] including resilient bent portions [Figure 4: (66)].

26. With regards to Claim 18, Ayres discloses the contact pads being made of a conductive metal or metallic alloy [Column 4, Lines 60-63].

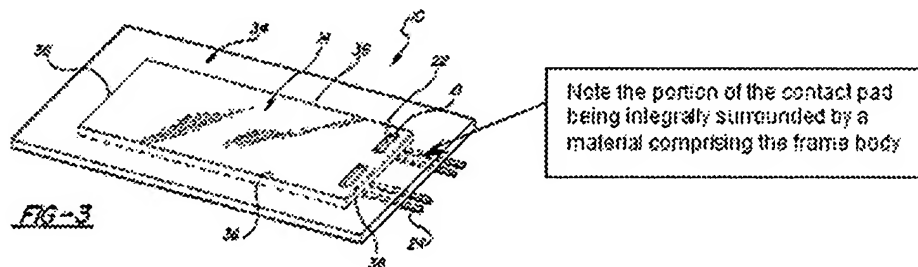
27. Claims 15 and 19 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayres (U.S. Patent 5947578).

28. With regards to Claim 15, Ayres discloses a frame structure for a backlight assembly including:

- A frame body [Figure 3: (34)] configured to assemble a liquid crystal panel with the backlight assembly [Column 1, Lines 34-36]; and
- A plurality of contact pads [Figures 2-3: (24)] embedded in the frame body, whereby a portion of each of the pads are integrally surrounded by a material comprising the frame body, wherein the contact pads externally connect to a



power source (inherent) and are configured to receive the mount of one or more light-emitting devices [Figures 2-3: (22)].



29. With regards to Claim 19, Ayres discloses the one or more light-emitting device including a light-emitting diode [Column 2, Lines 3-5].

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It should be noted that the method of forming a device is not germane to the issue of the device itself. Therefore, limitations regarding molding or forming does not have to be given patentable weight.

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30. Claims 20-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Ayres (U.S. Patent 6068381).

31. With regards to Claim 20, Ayres discloses a frame structure for a backlight assembly including:

- A frame body [Figure 1: (20, 24)] configured to assemble a liquid crystal panel [Figure 8: (86)] with the back light assembly [Figure 8: (90)]; and
- A plurality of contact pads [Figure 1: (58, 60)] configured to externally connect to a power source [Figure 4: (66); Column 5, Lines 9-13] and receive the mount of one or more light-emitting device [Figure 1: (52)], wherein the frame

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body is molded over a portion of one or more of the contact pads [Figure 9; Column 6, Lines 18-22].

32. With regards to Claim 21, Ayres discloses the frame body being formed by injection molding [Column 2, Lines 52-56].

33. With regards to Claim 22, Ayres discloses the contact pads [Figures 1 & 4: (56, 58, 60)] including resilient bent portions [Figure 4: (66)] to which the one or more light-emitting devices [Figure 4: (52)] are connected.

34. With regards to Claim 23, Ayres discloses the contact pads being made of a conductive metal or metallic alloy [Column 4, Lines 60-63].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

35. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ayres (U.S. Patent 6068381) as applied to Claim 20 above, and further in view of Ayres (U.S. Patent 5947578).

Ayres (6068381) discloses the claimed invention as cited above, but does not specifically teach the one or more light-emitting device including a light-emitting diode.

Ayres (5947578) teaches, "The lamp member may comprise any microminiature lamp including LEDs and an electrical lead frame mounting the lamp [Column 2, Lines 3-5]".

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It would have been obvious to one ordinarily skilled in the art at the time of invention to modify the backlight assembly of Ayres (6068381) to incorporate the light emitting diode(s) of Ayres (5947578) for the commonly known benefits of long-life, durability, efficiency, durability, low heat, and low power consumption associated with LEDs.


### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jason M. Han whose telephone number is (571) 272-2207. The examiner can normally be reached on 8:00am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

JMH (9/26/2005)

  
Stephen Husar  
Primary Examiner